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Substitute	for form 1449A/PTC			Complete if Known		
				Application Number	09/432,503	
		_	CLOSURE	Filing Date	November 2, 1999	
STATEMENT BY APPLICANT			PPLICANT	First Named Inventor	Cech, Thomas R., et. al.	
				Art Unit	1652	
	(use as many she	ets as	necessary)	Examiner Name	Peter P. Tung	
Sheet	1	of	12	Attorney Docket Number	015389-002611US	

			U.S. PATI	ENT DOC	UMEN	TS			
Examiner Che No.		Document Number  Number Kind Code <sup>2</sup> (if known)	Publication Date (if known) MM-DD-YYYY		Name of Patentée or Applicant of Olfed Document			Påges, Columns, Lines, Where Relevant Passages of Relevan Floures Appear	
	AA	08/751,189	11-15-90	6	Ha	mington, et al.		тідиль гфрац	
	AB	60/038,750	02-20-19	97		ounter, et al.			
	AC	3,817,837	06-18-19	74	Ta	nenholtz <i>et al</i> .			
	AD	3.860,752	11-26-19	74	s	chuurs et al.			
	AE	3,939,350	02-17-10	76	k	(ronick et al.			
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	AG	4,275,149	06-23-10	B1	ī	Jitman et al.			
V	AH	4,277,437	07-07-198	81		Maggio			
	Al	4,366,241	12-28-198	82		Tom et al.			
	AJ	4,683,195	07-28-198	<b>8</b> 7		Mullis <i>et al</i> .			
	AK	4,683,202	07-28-198	B7		Mullis			
	AĹ	4.816,567	03-28-196	39		Cabiliy et al.			
	AM	4,965,188	10-23-199	90		Mullis et al.			
	AN	5,489,508	02-06-199	96		West <i>et al.</i>			
	AO	5,583.016	12-10-199	<del>26</del>	Ville	pontesu et al.			
	A	5,747,317	05-05-199	36	Cao				
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	AR	6.093,809	07-25-200	00	(	Cech, et al.			
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	AU	6,261,836 - B1	07-17-200	)1	1	Cech et al.			
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	AX	6.475,789 B1	11-05-200	)2	Cech et al,				
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	U.S. PATENT DOCUMENTS								
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	BI	PCT	WO 98/08938			02-26-98			
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		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
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	ВО	1994 Genome Issue of Science (265:1981f)			
	BP	Anderson and Young. *Quantitative Filter Hybridization* in Nucleic Acid Hybridization pp73-111 (1985)			
	BQ	Ausubel et al.; (1989); Current Protocols in Molecular Biology; pp 5.1-5.11, 16.1-16.3 and 16.9-16.20; John Wiley & Sons, New York NY			
	BR	Autexier et al., "Reconstitution of human telomerase activity and identification of a minimal functional region of the human telomerase RNA." (1996) EMBO J, 15:5928			
	BS	Auxexier and Greider, "Functional reconstitution of wild-type and mutant <i>Tetrahymena</i> telomerase," (1994) <i>Genes Develop.</i> , 8:563			
	вт	Berger and Kimmel, Guide to Molecular Cloning Techniques; (1987); Meth. Enzymol.; vol. 152; pp 305-389; Academic Press; San Diego CA			
	BU	Biessman et al., "Addition of Telomere-Associated HeT DNA Sequences "Heats" Broken Chromosome End s In Drosophila," (1990) Cell, 61:663			
	BV	Bitter et al., "Expression and secretion vectors for yeast," Meth Enzymol., (1987) 153:516			
	8W	Blackburn and Chiou, "Non-nucleosomal packaging of a tandemly repeated DNA sequence at termini of extrachromosomal DNA coding for rRNA in Tetrahymena," (1981) <i>Proc. Natl. Acad. Sci.</i> , 78:2263			
	вх	Blackburn and Gall, * A tandemly repeated sequence at the termini of the extrachromosomal ribosomal RNA genes in <i>Tetrahymens</i> , * (1978) <i>J. Mol. Biol.</i> , 120:33			
	BY	Blackburn, "Telomerases," (1992) Ann. Rev. Blochem., 61:113			
		Bodnar <i>et al.</i> , "Extension of Life-Span by Introduction of Telomerase into Normal Human Cells," (1998) <i>Science</i> , 279:349			
		Bradford, "A Rapid and Sensitive method for the Quantitation of Microgram Quantities of Protein Utilizing the Principle of Protein-Dye Binding," (1976) Anal. Biochem., 72:248			
		Braunstein <i>et al.</i> , "Transcriptional silencing in yeast is associated with reduced nucleosome acetylation," (1993) Genes Develop., 7:592			

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		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
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	ļ	Calvio et al., "Identification of hnRNP P2 as TLS/FUS using electrospray mass spectrometry," (1995) RNA, 1:724	
		Caruthers et al., "New chamical methods for synthesizing polynucleotides," (1980) Nucleic Adds Res. Symp. Ser., 215-223	
		Chan and Tye, "Organization of DNA sequences and replication origins at yeat telomeres, " (1983) Cell, 33:563	
		Coibore-Garapin et al., "A new dominat hybrid selective marker for higher eukaryotic cells," (1981) J. Mol. Biol., 150:1	
· -		Cole et al., "The EBV-hybridoma technique and its application to human lung cancer," Monoclonal Antibodies and Cancer Therapy, Alan R. Liss Inc., New York NY 77-96 (1985)	
		Collins et el., "Purification of Tetrahymens telomerase and cloning of genes encoding the two peotein components of the enzyme," (1995) Cell, 81:877	
	-	Conrad et al., "RAP1 protein interacts with yeast telomers in vivo: Overproduction alters telomere structure and decreases chromosome stability," (1990) Cell, 63:739	
		Coombs, Dictionary of Biotechnology, (1994); pp. 101-102, 283, 301 and 332; Stockton Press, New York NY	
		Cote et al., "Generation of human monoclonal antibodies reactive with cellular entigens," (1983) Proc. Natl. Acad. Soi., 80:2026	
		Counter et al., "The catalytic subunit of yeast telomerase," (1997) Proc. Natl. Acad. Sci., 94:9202	
		Counter et al., (1994) Proc. Natl. Acad. Sci., 91:2900	
		Creighton; Proteins, Structures and Molecular Principles, (1983); pp. 1-60; WH Freeman and Co; New York, NY	
		Dieffenbach and Dveksler, <i>PCR Primer, a Laboratory Manual</i> ; (1995) pp. 131-156, 453-462 and 507-580; Cold Spring Harbor Presa, Plainview NY	
		Duplae of al., "Quantitative analysis of polymerase chain reaction products using biotinylated dUTP Incorporation," (1993) Anal. Biochem., 212:229	_

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	Ψ	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
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		Fang et et., "Oxytricha telomere-binding protein: separable DNA-binding and dimerization domains of the α-subunit," Genes Develop. 7:870 (1993) and Gray et al., (1991) Cell 67:807			
		Feng et al., "The RNA Componant of Human Telomerase," (1995) Science, 269:1236			
		GenBank Accession No. AA281296; April 2, 1997			
		Genbank accession no. AA299878: April 18, 1997			
		Genbank accession no. AA311750; April 19, 1997			
		Gliley et al., "Altering apecific telomerase RNA template residues affects active site function," (1995) Genes Develop., 9:2214			
		Gottechling and Cech, "Chromatin Structure of the Molecular Ends of Oxytricha Mononuclear DNA: Phased Nucleosomes and a Telomeric Complex." (1984) Cell, 38:501			
		Gottschling and Zaklan. "Telomere proteins: specific recognition and protection of the natural termini of Oxytricha macronuclear DNA." (1986) Cell 47:195			
		Grant <i>et al.</i> , Meth Enzymol., (1987) 153:516-544			
		Greenwood et al., "Phylogenetic relationships within the class oligohymenophores, phylum ciliophora, inferred from the complete small subunit rRNA gene sequences of Colpidium campylum, Glaucoma chattoni, and Opisthonecta henneguyi." (1991) J. Mol. Evol., 3:163			
		Greider and Blackburn, "A telomeric sequence in the RNA of Tetrahymena telomerase required for telomere repeat synthesis," (1989) Nature, 337:331			
		Greider and Blackburn, 'Identification of a specific telomere terminal transferase activity in Tetrahymena extracts,' (1985) Cell, 43:405			
		Grelder, "Telomerase is processive, " (1991) Mol. Cell. Biol., 11:4572			
		Greider, "Telomere Length Regulation." (1996) Ann. Rev. Blochem., 65:337			

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STATEMENT BY APPLICANT				First Named Inventor	Cech, Thomas R., et. al.
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Sheet	6	of	12	Attorney Docket Number	015389-002611US

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	т
		Hampton et al.: Serological Methods e Laboratory Manual; (1990); pp. 33-86, 179-286; APS Press, St Paul MN	
		Harrington et al., "A Mammallan Telomerase-Associated Protein," (1997) Science, 275:973	
		Harrington et al., "Human telomerase contains evolutionarily conserved catalytic and structural subunité," (1997) Genes Dev., 11:3109	
		Hartman and Multigan, "Two dominant-acting selectable markers for gene transfer studies in mammalian cells," (1988) Proc. Natl. Acad. Sci., 85:8047	
		Henderson and Blackburn, "An overhanging 3' terminus is a conserved feature of telomeres," (1989) Mol Cell. Biol., 9:345	
		Hom et al., "Synthesis of oligonucleotides on cellulose, Part II: design and synthetic strategy to the synthesis of 22 oligodeoxynucleotides coding for gastric inhibitory polypeptide (GIP)," (1980) Nucleic Acids Res. Symp. Ser., 225-232	
		Hudson et al., "An STS-based map of the human genome," (1995) Science, 270:1945	
· · · · · · · · · · · · · · · · · · ·		Huse et al., "Generation of a large combinatorial library of the immunoglobulin repertoire in phage lambda," (1989) Science, 246:1275	
		Johnson et al., (1991) Mol. Cell Blol. 11:1	
	·	Killan et al., "Isolation of a candidate human telomerase catalytic subunit gene, which reveals complex splicing patterns in different cell types," (1997) Hum. Mol. Genet., 6:2011	
		Kipling and Cooke, "Hypervariable ultra-long telomeres in mice." (1990) Nature 347:400	
		Klobutcher et al., "All gene-alzed DNA molecules in four species of hypotrichs have the same terminal sequence and an unusual 3' terminus," (1981) Proc. Natl. Acad. Sci., 78:3015	
		Koehler and Milstein, "Continuous cultures of fused cells secreting antibody of predefined specificity," (1976) Nature 256;495	
		Kosbor et al., "The production of monoclonal antibodies from human lymphocytes," (1983) Immunol. Today 4:72	

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		Lamond and Sproat; (1994)*Isolation and Characterization of Ribonucleoprotein Complexes;" In RNA Processing: A Practical Approach; (Higgins, S.J. and Hawes, B.D. Eds.), Volume 1; pp103-140	
		Lamond et al., *Probing the structure and function of U2 snRNP with antisense oligonucleotides made of 2*-OMe RNA,* (1989) Cell. 58:383	
		Lendvay et al., "Senescence mutants of Saccharomyces cerevisiae with a defect in telomere replication identify three additional EST genes," (1996) Genetics, 144	
		Lingler et al., "Purification of telomerase from Euplotes adelculatus: requirement of a primer 3' overhang," (1996) Proc. Natl. Acad. Sci., 93:10712	
		Lingler et al., "Reverse transcriptase motifs in the catalytic suburit of telomerase," (1997) Science, 276:561	
		Lingrier et al., * Telomerase RNAs of different ciliates have a common secondary structure and a permuted template. * (1994) Genes Develop 8:1984	
		Lingner et al., "Telomerase and DNA End Replication: No Longer a Lagging Strand Problem?," (1995) Science 269:1533	
		Lowy et al., "Isolation of transforming DNA; Cloning the hamster apri gene," (1980) Cell, 22:817	
		Lustig and Petes, identification of yeast mutants with altered telomere structure," (1986) Proc. Natl. Acad. Scl., 83:1398	
		Maddox et al., "Elevated serum levels in human pregnancy of a molecule immunochemically similar to eosinophil granule major basic protein," (1983) J. Exp. Med., 158;1211	
	_	Makerov et al., "Nucleosomal Organization of Telomere-Specific Chromatin in Rat." (1983) Gell, 73:776	
		McEachern and Blackburn, "runsway telomere elongation caused by telomerase RNA gene mutation," (1995)  Nature, 376:403	
		Melby et al., "Quantitative measurement of human cytokine gene expression by polymerase chain reaction," (1993)  J. Immunol. Meth., 159:236	
		Merrifield, "Solid phase peptide synthesis. I. The synthesis of a tetrapeptide," (1963) J. Am. Chem. Soc., 85:2149	

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INIEO	DAMATI	ON DIC	CLOSURE	Application Number	09/432,503	
				Filing Date	November 2, 1999	
SIAI	I FMFV.	IBAY	PPLICANT	First Named Inventor	Cech, Thomas R., et. al.	
				Art Unit	1652	
(use as many sheets as necessary)				Examiner Name	Peter P. Tung	
Sheet	8	of	12	Attorney Docket Number	015389-002611US	

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Cite No.1		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		Meyerson et al., "hEST2, the Pulative Human Telomerase Catalytic Subunit Gene, is Up-Regulated in Tumor Cells and during Immortalization," (1997) Cell, 90;785	
		Murray, In McGraw Hill Yearbook of Science and Technology, (1992) McGraw Hill, New York NY, pp 191-196	
		Nakalmura et et., "Telomerase Catalytic Subunit Homologs from Fission Yeast and Human," (1997) Science, 277:955	
		Nakayama et al., "TUP1: A Gene Encoding a Protein Component of Mammalian Telomerase is a Novel Member of WD Repeats Family," (1997) Cell,88:875	_
		Nielsen et al., (1993) "Peptide nucleic acids (PNAs): Potential antisense and anti-gene agents," Anticancer Drug Des., 8:53	
		Oka et el., "Inverted terminal repeat sequence in the macronuclear DNA of Stylonychia pustulato." (1980) Gene, 10:301	
		Olovrlikov, "A theory of marginotomy. The incomplete copying of template margin in enzymic synthesis of polynucleotides and biological significance of the phenomenon," (1973) <i>J. Theor. Biol.</i> , 41:181	
		Orlantti et al., "Cloning immunoglobulin variable domains for expression by the polymerase chain reaction," (1989)  Proc. Natl. Acad. Sci., 86:3833	
		Prescott, "The DNA of ciliated protozoa," (1994) Microbiol. Rev., 58:233	
		Price, (1993) Blood Rev., 7:127	
_		Rhodes et al., "Transformation of malze by electroporation of embryos," (1995) Meth. Mol. Biol., 55:121	
		Roberge <i>et al.</i> , "A strategy for a convergent synthesis of N-linked glycopeptides on a solid support," (1995) <i>Science</i> , 269:202	
		Romero and Blackburn, "A conserved secondary structure for telomerase RNA, " (1991) Cell, 67:343	
		Sambrook et et.: Molecular Cloning, A Laboratory Manual; (1989); pp. 8.1-8.86 and 16.1-17.44; Cold Spring Harbor Press, Plainview NY	

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Application Number	09/432,503				
Filing Date	November 2, 1999				
First Named Inventor	Cech, Thomas R., et. al.				
Art Unit	1652				
Examiner Name	Peter P. Tung				
Attorney Docket Number	015389-002611US				

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		Sentiell et al., "Transcription of yeast telomere alleviates telomere position effect without affecting chromosome stability. "(1994) Proc. Natl. Acad. Sci., 91:12061	
. <u> </u>		Sanger et al., "DNA sequencing with chain-terminating inhibitors," (1977) Proc. Natl. Acad. Sci., 74;5453	
		Scharl et al., "Heat stress promoters and transcription factors." (1994) Result Probl. Cell Differ. 20:125	
		Shampay and Blackburn, "Generation of telomere-length heterogeneity in Saccharomyces cerevisiae," (1988) Proc. Natl. Acad, Sci., 85:534	
		Sheen and Levis, "Transposition of the LINE-like retrotransposon TART to Drosophila chromosome termini," (1994) Proc. Natl. Acad. Sci., 91;12510	r
		Singer and Gottschiling, "TLC1: Template RNA Component of Saccharomyces cerevisiae Telomerase," (1994) Science 266:404	
		Starling et al., "Extensive telomere repest arrays in mouse are hypervariable." (1990) Nucleic Acids Res., 18:6881	
		Swanton et al., "Arrangement of Coding and Non-coding Sequences in the DNA Molecules Coding for rRNAs In Oxytricha sp.," (1980) Chromosoma 77:203	
		Tommerup et al., "Unusual chromatin in human telomeres," (1994) Mol. Cell. Blol., 14:5777	
		Trask, "Fluorescence in situ hybridization: application in cytogenetics and gene mapping," (1991) Trands Genet., 7:149	
		Verma et al.; "Human Chromosomes: A Manual of Basic Techniques;" (1988): pp. 4-30, 152-190; Pergamon Press, New York NY	
		Watson, "Origin of concatermeric T7 DNA." (1972) Nature New Blol., 239:197	
		Weinrich et al., "Reconstitution of human telomerase with the template RNA component hTR and the catalytic protein subunit hTRT," (1997) Nat. Genet., 17(4):498-502	
		Wellinger et al., "Origin activation and formation of single-strand TG₁⊲ talls occur sequentially in late S phase on a Yeast Ilnear plasmid." (1993) Mol. Cell. Blol., 13:4057	

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Substitute for form 1449B/PTO Complete if Known **Application Number** 09/432.503 INFORMATION DISCLOSURE Filing Date November 2, 1999 STATEMENT BY APPLICANT First Named Inventor Cech, Thomas R., et. al. Art Unit 1652 (use as many sheets as necessary) Examiner Name Peter P. Tung Sheet of | 12 Attorney Docket Number 015389-002611US

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the ltem (book, magazine, lournal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T2
		Wellinger et al., "Saccharomycas Telomeres Acquire Single-Strand TG <sub>1-3</sub> Talis Late in S Phase," (1993) Cell 72:51	
		Whitehead Institute/MIT Center for Genome Research, Genetic Map of the Mouse, Database Release 10, APril 28, 1995	• • • • • • • • • • • • • • • • • • • •
	-	Wigier of al., "Transfer of purified herpes virus thymidine kinase gene to cultured mouse cells," (1977) Cell, 11:223	
		Wigler et al., "Transformation of mammalian cells with an amplifiable dominant-acting gene," (1980) Proc. Natl. Acad. Sci., 77:3567	
:		Winter and Milstein, "Man-made antibodies," (1991) Nature, 349:293	
		Wright et al., "Saccharomyces telomeres assume a non-nucleosomal chromatin structure, " (1992) Genes Develop., 6:197	
		Yu et et., "In vivo atteration of telomere sequences and senescence caused by mutated Tetrahymena telomerase RNAs." (1990) Nature, 344:126	
		Zahler and Prescott, "Telomere terminal transferase activity in the hypotrichous clilate Oxytricha nova and a model for reblication of the ends of linear DNA molecules," (1988) Nucleic Acids Res., 16:6953	
		Zeklan, Telomeres: Beginning to Understand the End,* (1995) Science 270:1601	
		Zaug et al., *Catalysis of RNA Cleavage by a Ribozyme Derived from the Group I Intron of Anabaena Pre-tRNA (1996); Nucleic Acids Research; 24:532-533	

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